

Music To Your Eyes

The Camera Craft

VIDEO

JANUARY

\$1.50

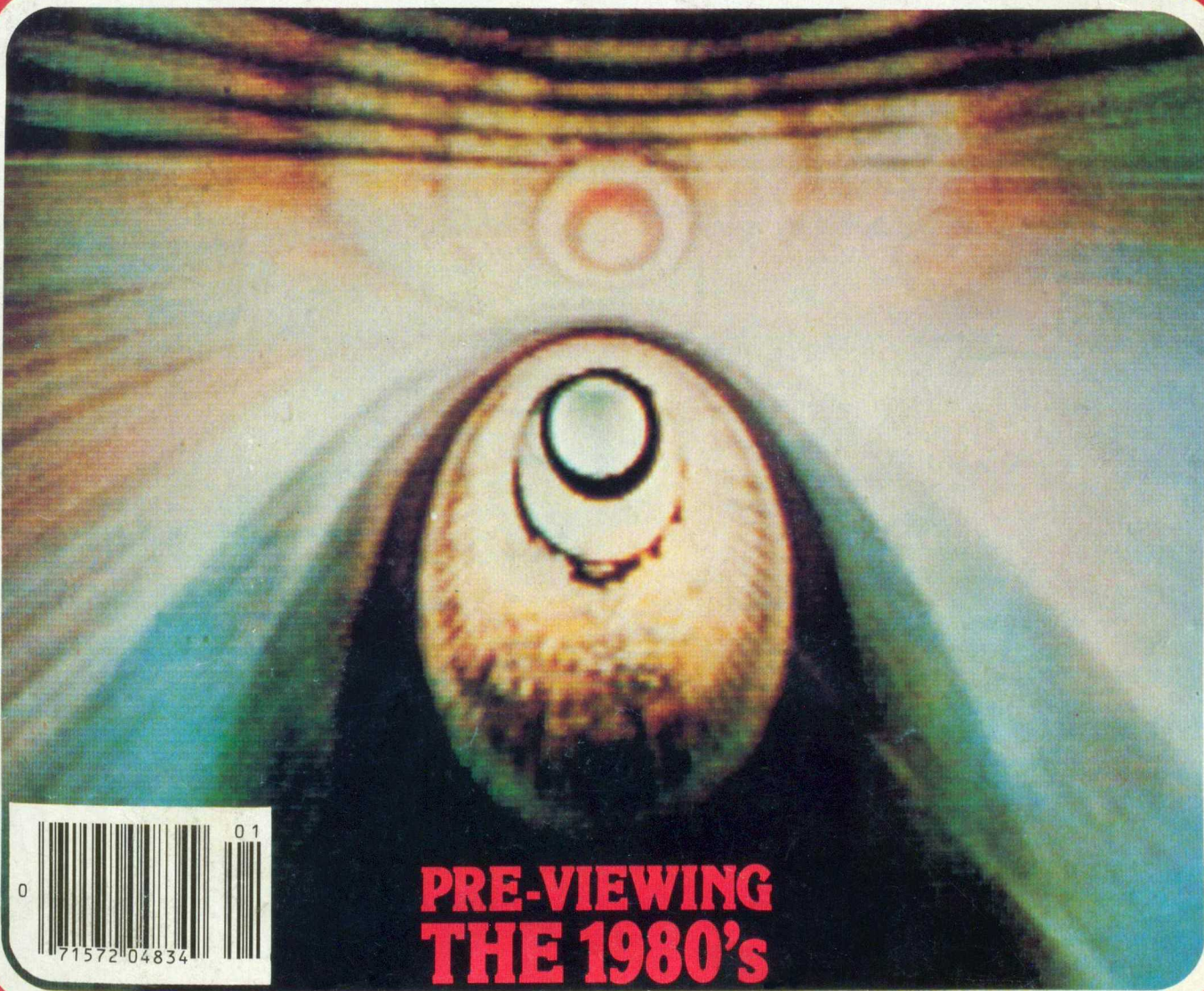
DELL 04834

THE #1 MAGAZINE OF HOME VIDEO

LITTLE-KNOWN FACTS ABOUT BIG-SCREEN VIEWING • YOUR RIGHTS AS A PROGRAM OWNER • THE ART OF VIDEO • NEW TECHNICAL COLUMN • THE VIEW FROM OUTER SPACE • NEW PRODUCTS: REPORT FROM BERLIN

BERGER-BRAITHWAITE VIDEOTESTS:

**MAGNAVOX VIDEODISC PLAYER • APPLE II COMPUTER • JVC PORTABLE VHS SYSTEM
SHARP DUALVISION TV**



**PRE-VIEWING
THE 1980's**

Editor
Bruce Apar

Managing Editor
Rena Adler

Art Director
Harvey Hersh

Associate Editor
Stephen Poe

Senior Technical Editor
Ivan Berger

Technical Editor
Lancelot Braithwaite

Programming Editor
Ken Winslow

Technology Editor
Martin Polon

VideoGram Editor
Susan March

Copy Editor
Amy Rich

Contributing Editors
Robert Gerson
Gary Jitt
Arnie Katz
Charlene Komar
Bill Kunkel
Frank T. Laney II
Michael Mascioni
James Roman
Norman Schreiber

Graphic Consultants
Creative Concepts

Art Assistant
Andrew Wong

Staff Assistant
Velma Rivera

Photographer
Bob Ghiraldini

Publisher
Jay Rosenfield

Co-Publisher
Bruce Apar

National Advertising Director
Bruce Mishkin

Circulation Director
Max Wolff

Marketing Director
Tom Koger

Business Manager
Janette Evans

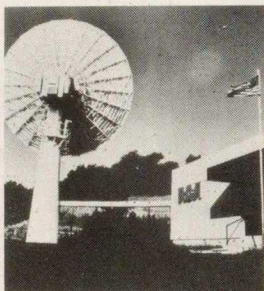
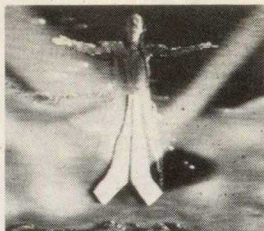
Assistant to Publisher
Joyce Davis

West Coast
Advertising Representative
Bill Slapin & Co.
15720 Ventura Blvd. Suite 222
Encino, CA 91436
(213) 995-0257

ABOUT OUR COVER

Depicting this issue's look at the coming decade is a scene from "Prelude & Love / Death," a 20-minute visualization of Richard Wagner's classical piece by artist Ron Hays, the subject of our lead story on page 36. A multimedia entertainment made with video, film, computers, and other technological tools, "Prelude" was produced in three cities and completed in 1971 in New York.

video



PRE-VIEWING THE 1980s

Positive Media

by Paul Holman

35

A historical, forward-looking statement on personal communications and video's role in our evolution.

Ron Hays: Portrait of A Video Artist

36

What is it like to visualize music for a living? California artist Ron Hays and his Music Image company are exploring multimedia art forms that may result in new types of non-narrative entertainment.

Music to Your Eyes

by Jonathon Takiff

40

For many executives in the record business these days, the secret word is "videogram." What's that? Take a pop music recording act, produce a videocassette of the artist (s) in action, and see how fast it climbs the charts.

HIGH-TECH VIDEO

The View from Outer Space

by Martin Polon

44

Soon we'll be enjoying the benefits of advanced transmission and reception techniques originally developed for government use by military and space engineers.

The Magic of Microprocessors

by Christopher Weaver

46

Micro-sized electronic brains—computer chips called microprocessors—can perform tasks with incredible efficiency and precision. Find out what they are, what they do, and what they will mean to you.

New Product Report from Berlin

by Stephen Poe

22

3-D TV

by Jesse Eichenlaub

50

The Video Environment

by Dan Shannon

42

Video Manual: Little Known Facts About Big-Screen Viewing

by Bernard Lee

48

Video Programming Guide

Edited by Ken Winslow

18

VideoTests by Berger-Braithwaite Labs

Ivan Berger & Lancelot Braithwaite

24

Magnavox Videodisc Player

JVC Portable VHS System

Sharp 17" Dualvision TV

Apple II Home Computer

Columns

CHANNEL ONE A Generation Grows Up.....	Bruce Apar	6
VIDEO PROGRAMMER Pre-Recorded Cassette Ownership Rights.....	Ken Winslow	10
TELEVISIONS Super Monday at CBS.....	Arnie Katz	12
THE TV DEN The Camera Craft—Part I.....	Bill Smolen	16
VIDEOGRAM News & Information from the World of Video.....	Susan March	32
FINE TUNING Two Keys to Better Color TV.....	Stan Prentiss	53
ARCADE ALLEY Magnavox's Odyssey ² Games.....	Bill Kunkel & Frank T. Laney II	72

Departments

FEEDBACK VIDEO readers air their views.....	8
NEW PRODUCTS The latest in equipment & accessories.....	54

VIDEO is published bi-monthly, plus Buyer's Guide, by Reese Publishing Company, Inc. 235 Park Avenue South, New York, N.Y. 10003. Single copy price \$1.50 (1981 Buyer's Guide issue \$2.95). One-year subscription (6 issues) \$9.00. Second-class postage rates paid at N.Y., N.Y. and additional mailing offices. © 1979 by Reese Publishing Company, Inc. All rights reserved. © under Universal, International and Pan American Copyright Conventions. Reproduction of the editorial or pictorial content in any manner is prohibited. All material listed in this magazine is subject to manufacturer's change without notice, and the publisher assumes no responsibility for such changes. Printed in the U.S.A.



VideoGram

News & Information from the World of Video

by Susan March



Sears Remembers the Alamo

For home owners in San Antonio, Texas, Sears Roebuck & Co. has suddenly become the place where America shops when it's thinking of subscription TV.

Last summer, an agreement was signed between Video Entertainment, broadcasters of the Showtime subscription-TV service, and Sears for the giant retailer to handle the marketing, installation, and financing of services to the home market in the Alamo City. Video Entertainment will continue to service

apartment dwellers.

Showtime service, unlike cable TV, offers movies and other entertainment over-the-air like regular TV stations, thus eliminating the need for any special cable wiring. All that is required is a special antenna and decoder on the roof of a home to pick up the programming.

Offered on a two-year subscription basis to homes, Showtime costs \$18 a month, including a one-time installation fee and service maintenance. Fourteen to twenty

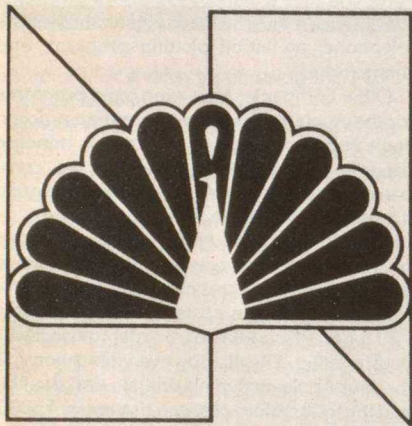
movies and shows from Broadway and Las Vegas are being shown each month, running 5 P.M. to 2 A.M. during weekdays and about 2 P.M. to 2 A.M. on weekends. Each weekday, about three to four different programs are featured; on weekends the variety runs to five or six. Each program is shown five to ten different days throughout the month.

Subscribers of the new home service deal only with Sears—from installation to service maintenance. Sub-

scribers can even say "Charge it!" if they have a Sears credit card.

Both Video Entertainment and Sears are confident the service will be a success; executives point out that competition from cable (which can be used concurrently) is some three to four years off before the city is completely wired.

Sears offers a similar over-the-air subscription-TV service in Los Angeles, and is signing on subscribers at the rate of about 5000 a month.



NBC Says: "No, We'll Stick with Status Quo"

In the face of shrinking profits, plummeting Nielsen ratings and a behind-the-scenes corporate shake-up, Fred Silverman, the controversial head of the National Broadcasting Company, said NBC will not follow the lead taken by ABC and CBS in offering new types of video programming for home viewing.

Silverman has nixed the idea of involving the network in programming for cable, videodisc, and the like primarily because of his belief that "we [NBC] are broadcasters and we are going to remain broadcasters." Instead, he told the California Broadcasters Association, he's going to make better use of NBC program-

ming to compete with the new technologies.

Silverman bases much of his strategy on an NBC study that concluded that the outlook for the basic broadcast medium is very favorable. One prediction reached by NBC researchers is that during the next ten years commercial TV will remain "America's first choice." In fact, Silverman claims that by the latter part of the decade, TV broadcasting may very well achieve a 100 percent saturation in American homes—reaching about 89 million households.

The study goes on to predict a 30 percent penetration for cable by 1988, a 12 percent

penetration for pay-cable, and a meager 4 percent for over-the-air subscription TV.

Turning to new consumer video equipment, the NBC report concluded that during this same time frame, only 15 percent of U.S. households will have VCRs compared with 20 percent for videodisc players. Video games should be in 20 percent of U.S. homes, while home computers may reach about 10 percent.

Silverman's confidence is further fueled by a belief that these new technologies just won't be able to devote as many dollars for programming as the Big Three networks, especially in news coverage.

New Look for Old Operation

Big-screen TVs, cameras, VCRs, computer games, and TV sets from every major supplier are on display in this newly designed Video Salon at Columbia Audio/Video in Highland Park, Illinois.

The headquarters store for the 32-year-old, four-store electronics specialty business has over 10,000 sq. ft. of showroom space, vice-president Gene Kahn told VIDEO.

Reflecting increased public interest in all forms of home entertainment, Kahn noted the store's grand opening was in conjunction with the company's updated image. The new name was formed when two sister divisions, Columbia Video Systems and Columbia Hi-Fi & TV, joined forces to create a more unified identity.

The Video Salon also houses a full-scale production studio, featuring industrial and professional equipment.





Sylvania Plans Future in Computers, Videodisc

"During my career I've always been interested in the application of better methods for consumer participation in video and audio areas.

"I've also had a long-time interest in the evolution of equipment and software for entertainment and educational purposes.

"I'm glad to see that entertainment and education for the consumer marketplace are finally moving along parallel lines."

Speaking is Thomas R. Shepherd, senior vice-president and general manager of GTE Entertainment

Products, makers of Sylvania and Philco brand items. Last fall, Shepherd helped push his company one more step in that entertainment/educational direction.

In October, General Telephone & Electronics began selling, under the Sylvania label, the Intellivision computer-based home entertainment and information processing system first shown by Mattel Electronics.

GTE has been working on the project for about two years, and produces the hardware for both labels in its Circuits Products division.

Intellivision, with its audio/video connection to the TV set, has been described as providing the transition between the video game and home computer. The basic system consists of a 16-bit microprocessor master component and two hand-held controllers. Users can play action-oriented games or work with educational programs.

The addition of a keyboard component converts the system into an interactive computer, with pre-programmed cassettes offered in financial management, health, and personal improvement.

"The Intellivision system meets a rapidly growing need in the market as color TV evolves from a purely off-the-air receiver to a device that provides for multiple use under the control of the viewer," Shepherd said.

GTE is also involved in other uses for the TV set, most notably Viewdata in the U.S. and Canada. Viewdata is a data base information system that enables users to view color text and graphics on a variety of topics, transmitted over telephone lines to home video terminals.

At the time we spoke with them, Sylvania had not yet priced the Intellivision master component nor the keyboard due this month. However, Mattel's system is about \$300 to \$350, and an official at that company said the keyboard and one free cassette would bring the total package to \$550 to \$650. Cartridges run from about \$20 to \$25.

Turning to the videodisc, Shepherd told VIDEO that he sees its principal purpose as enhancing the audio portion of programs (in addition to providing the visual image). "People," he commented, "will no longer be required to be glued to the screen to get full enjoyment of their programs. I'd assume that Sylvania will be in the videodisc business during the 1981-1982 period, when its usage will have wider appeal. I think the disc phenomenon will take off quickly, and will be outselling VCRs by 1983." For Sylvania, Shepherd sees a system in the \$400 price range.

"But I do see a future for both the VCR and disc. VCR seems to be essentially a time-shift device or a home photography system. The disc player's purpose will be to only play pre-recorded material."

A Videodisc that Records, Too

A report that appeared last year in a Japanese business periodical said that work is being conducted by Matsushita Electric (parent of Panasonic and Quasar) to develop recording capability on the laser-type optical pickup videodisc system. This is the type developed by Philips/MCA, and is now being sold by Magnavox and shortly by U.S. Pioneer.

What makes this news even more interesting is the fact that in the so-called disc war being waged between the optical and stylus-type pickup proponents, Matsushita has shown only prototypes of systems using stylus-type pickup.

According to the report, Matsushita is working on altering the strength of the laser beam to make it possible to both record and reproduce information—just like a VCR.

But like any other research and development work, it may be years before we see this technology in stores. Right now, Matsushita has reportedly only gone so far as to achieve success with still images.



The 1980 Redwood Olympics

The Olympic spirit has hit Redwood City, California, the home base of Ampex Corp., which just happens to be the official supplier of videotape recorders, slow-motion disc recorders, and magnetic recording tape for the 1980 Moscow Olympics.

Pictured here are members of the company's Runners Club working out in their new Ampex Olympic T-shirts.



SAVE
money & energy
shop by
PHONE

CALL TOLL FREE
800-526-5383

• BLANK VIDEO
TAPES

• VIDEO MACHINES

• COMPLETE PRE-
RECORDED TAPE
LIBRARY

NEW

**Dupont
Tapes**

also
BETA FORMAT
For ONLY

L375 7.95
L500 9.95

AVAILABLE FOR DELIVERY

SONY • TOSHIBA • RCA
PANASONIC • HITACHI
JVC

MINIMUM ORDER 5 TAPES
ALL MERCHANDISE FACTORY PACKED
MANUFACTURERS GUARANTEE
ADD \$4.00 FOR SHIPPING AND HANDLING
OF 1st CASE, \$1.00 EACH ADDITIONAL
CASE OF 5.

SEND CHECK OR MONEY ORDER
TO

MAGNETIC TAPE WAREHOUSE

360 S. Maple Ave. • Glen Rock, N. J. 07452
Telephone 201 445-3260

Hours - Mon. thru Sat. 10:00AM to 8:00PM E.S.T.

For additional information,
circle No. 29 on Reader Ser-
vice Card.

VISA



Arcade Alley

A Critical Look at Video Cartridge Games & Programs

by Bill Kunkel & Frank T. Laney II



**MAGNAVOX
ODYSSEY²**

- Speedway
- Spin-Out
- Crypto-logic
- Baseball
- Cosmic Conflict

Pioneering doesn't always turn out to be an advantage—as has certainly proven to be the case with Magnavox in the area of home arcades.

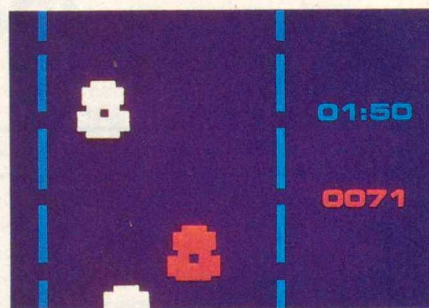
It was that company's "pre-wired" Odyssey that paved the way for today's sophisticated programmable game machines and did much to create enthusiasm for home arcades, but that early unit was undeniably riddled with design shortcomings. It was the competitors, who flooded the game market in the wake of the trailblazing Odyssey and offered more technologically advanced units, who captured the lion's share of the business.

Odyssey² is the first programmable game machine from Magnavox. But rather than charge in blindly again, the company has evidently labored long and hard to create a truly outstanding state-of-the-art home video arcade. In fact, this machine may well be the best value in its price class (it retails for \$179.95), and it boasts features previously found only on more expensive units.

The **SPEEDWAY/SPIN-OUT/CRYPTO-LOGIC** game comes packed with the Odyssey² and is a good showcase for the machine's capabilities. The trio of contests provides a pleasing variety of action well calculated to whet the arcade addict's appetite for more.

Speedway is a home electronic version of the driving game that has been a staple of amusement arcades for several decades. Competing against a two-minute time limit, the player steers an auto down a road to score points while attempting to avoid time-consuming crashes with oncoming cars. There is a

choice of two game speeds, but the slower one is too easy to use except as a learning tool.



Driving in the fast lane is another matter. Players will be hard-pressed to score more than 4200 out of the possible 5000 points before time runs out. Zigging and zagging back and forth across the road may look like the best route to a high score, but most drivers will find hugging the right shoulder of the road to be more productive in the long run. Go full speed at all times and concentrate on whipping around cars rather than braking to avoid them.

Spin-Out pits two players against each other in a high-speed race around an en-

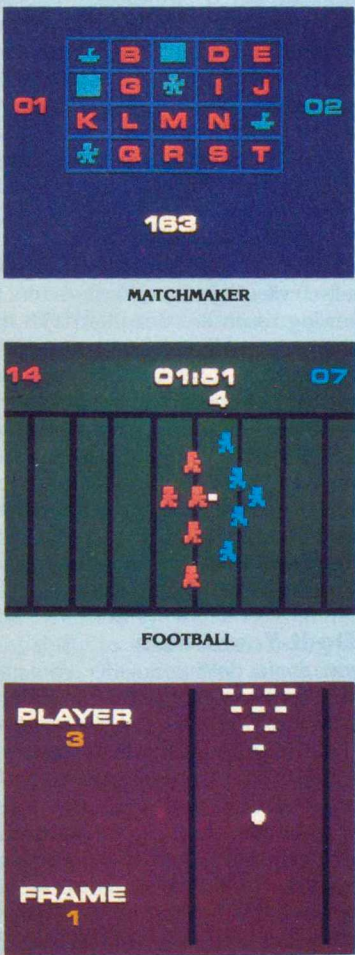


closed track. There is a good range of game variations for this one: two speeds, two different race lengths, and a pair of raceways. It is strongly recommended that players practice with the slower speed

Bill Kunkel is a N.Y.-based writer and veteran video game hustler. Frank T. Laney II is a freelance writer specializing in pseudonyms.

until they can zip through fifteen laps in about three minutes before trying the fast cars. Though Spin-Out is best with two players, you can drive solitaire too, playing against the clock.

Crypto-logic is a variant of Hangman. One contestant encodes a word or phrase and the other player attempts to dope it out letter by letter. The person who deciphers the message in the fewest tries is the winner. This game might be an easy way for parents to help their school-age children with their spelling.



MATCHMAKER

FOOTBALL

BOWLING

Some Other Games Offered by Magnavox

BASEBALL is the closest thing to the national pastime ever offered to home video game enthusiasts. The Odyssey² version simply provides more options for both fielding and hitting teams than rival baseball cartridges.

Pitching is an important part of the game, though it is not completely dominant as in some arcade baseball games. You can throw curves, change-ups, fastballs (not recommended since the machine is no Nolan Ryan) and screwballs. It's even possible to hurl a baffling knuckler by rotating the joystick in a tight

(continued on page 84)

PANASONIC • JVC • QUAZAR • RCA • SCOTCH • MGA • AMPEX • TDK

A VIDEO CASSETTE MOVIE

\$450?

TRADE
IN
PRICE

NO MONTHLY CHARGES

NO LIMIT ON TRADES

NO DUES

NO FEES

YES

☐ Send this ad with your name and address to receive free information on how you can save on video cassette movies.

OVER 500 MOVIES

Children - Family - Classics - Adult

BLANK TAPES

T-120 VHS — 2 to 6 Hours

16 ⁸⁸	*	17 ⁴⁸	*	18 ⁸⁸
EA.	*	EA.	*	EA.
Lots of 10	*	5 to 9	*	1 to 4

L-750 BETA — 3 to 4½ Hours

16 ⁷⁷	*	17 ³⁷	*	18 ⁷⁷
EA.	*	EA.	*	EA.
Lots of 10	*	5 to 9	*	1 to 4

L-500 BETA — 1 to 3 Hours

12 ⁶⁶	*	13 ⁶⁶	*	14 ⁶⁶
EA.	*	EA.	*	EA.
Lots of 10	*	5 to 9	*	1 to 4

ORDER FORM

UNITED VIDEO CLUB OF AMERICA

P.O. Box 186, Keansburg, NJ 07734
201-495-9734

- ☐ Please send free information on Video Cassette Movies.
☐ Please send catalog with over 500 movies. \$2.95 is enclosed. The manufacturer of my machine is _____
The format is ☐ VHS ☐ BETA

Please send me the following blank tapes:

(Qty.)	T-120 VHS	(Qty.)	L-500 BETA	(Qty.)	L-750 BETA
_____	16.88 ea. lots of 10	_____	12.66 ea. lots of 10	_____	16.77 ea. lots of 10
_____	17.48 ea. 5 to 9	_____	14.66 ea. 5 to 9	_____	17.37 ea. 5 to 9
_____	18.88 ea. 1 to 4	_____	14.66 ea. 1 to 4	_____	18.77 ea. 1 to 4

Enclosed find \$ _____ ☐ Check ☐ Money Order
☐ VISA-BankAmericard ☐ Master Charge

Card No. _____ Exp. Date _____

Name _____

Address _____

City, State _____ Zip _____

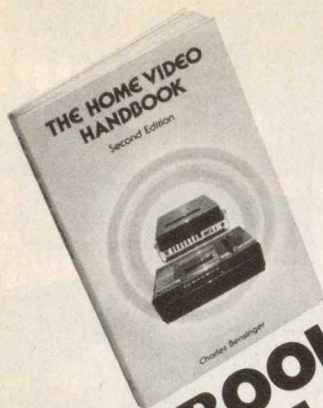
SIGNATURE _____

Add \$2.00 Postage & Handling for 1-4 pcs.; \$3.00 for 5-10 pcs.

• MAXELL • DUPONT • FUJI • SANYO • SONY • TOSHIBA • MEMOREX •

PANASONIC • JVC • QUAZAR • RCA • SCOTCH • MGA • AMPEX • TDK • FUJI • SANYO • SONY • MAXELL • DUPONT • TOSHIBA • MEMOREX • HITACHI • ZENITH

PANASONIC • JVC • QUAZAR • RCA • SCOTCH • MGA • AMPEX • TDK • MAXELL • DUPONT • FUJI • SANYO • SONY • TOSHIBA • MEMOREX • HITACHI • ZENITH



THIS BOOK TELLS ALL!

Our best seller is now bigger and better! Totally updated with 100 additional pages, **The Home Video Handbook** is now 304 pages crammed with the latest information on:

- How to get the most for your money
- Pros and cons of Beta and VHS formats, models and brands
- Practical how-to-do-it production techniques, plus tips on how to earn extra money with video gear
- Sources and critique of prerecorded programming
- How to care for your equipment
- How to be the "pros"
- Tapes like the "pros"

Even if you're just thinking about buying a videocassette recorder, you should not be without this complete guide to buying, using and enjoying Home Video Recording.

The Home Video Handbook!
It's all here for \$8.95

Comprehensive VIDEO SUPPLY CORPORATION
148 VETERANS DRIVE, NORTHVALE, NJ 07647
For Master Charge or Visa credit card orders call TOLL FREE 800-526-0242. In N.J. and metro N.Y. call 201-767-7990

Please send me _____ **V180**
copies of the *Home Video Handbook* @ \$8.95 ea. \$ _____
Postage and handling _____
copies @ \$1.05 per copy. \$ _____
N.J. residents add 5% sales tax.
☐ Check ☐ Money Order
Total enclosed \$ _____
No C.O.D.'s please.
Name _____
Address _____
City _____ State _____ Zip _____

type of integral photography system. Integral photographic systems do not require the use of lasers, and they are easy for computers to work with, so they will probably see a wide application as soon as they are fully developed. No such devices have been built in the U.S., but ITT holds a patent for one variation that was intended to be used as a radar display.

Even as early as the first several years of the 1980s, the TV networks will have the capability to start broadcasting in stereoscopic 3-D, which you can watch wearing special glasses. In the meantime, the X-ray technicians, professional computer operators, and electronics engineers will be getting their hands on fancier, expensive 3-D sets for non-commercial use. As is usually the case, not too many more years will pass before the video games people and the home computer companies, and maybe even home video oriented companies, get their hands on the new technology. So by the turn of the century you might be watching the Dallas Cowboy cheerleaders dance on your living room rug, or turning your den wall into a picture window behind the Yankees' home plate. 3-D tennis, anyone? **V**

Arcade Alley

continued from page 73

circle to the left or right immediately upon releasing the pitch.

The team in the field may position the three outfielders prior to making a pitch, and the joystick reverts to controlling the same trio of players should the batter hit the ball. Infielders are stationary, but they will catch balls hit in their direction.

Once a fielder gets to a batted ball, his throw can be directed to any base at the fielding team manager's option. (Habitually throwing behind the runner is a sure ticket to a lopsided loss, just as in real-life baseball.) The ability to control throws to the bases makes it possible for Magnavox to give the team at bat several baserunning choices. Runners can advance after a long fly ball or even stretch a hit by taking the extra base.

Unfortunately, all runners must either advance or hold their bases in unison. For example, with men on first and third, a long fly out may well not score the lead runner, because the one on first, automatically forced to bolt for second at the same time, would be a sitting duck. It's also much easier for an outfielder to make such a play at second in this game than in real baseball. This is worth keeping in mind if you don't want your team's big inning to be nipped in the bud by reckless baserunning.

The cartridges, retailing at \$19.95, feature a pleasing mix of games, including several challenging math and word contests. The major gaps in the current software line are the total absence of pad-

dle games—Odyssey 2 uses the joystick for everything—and a scarcity of solitaire games. Periodic new releases may eventually solve these problems, however.

COSMIC CONFLICT is a classic space battle that brings the flavor of *Star Wars* to the home screen. In this solitaire contest, the player is captain of a spaceship cruising a galaxy filled with tempting targets and merciless enemy starfighters. The mission: destroy the ten transports and five guarding starfighters before expanding your ship's energy supply of 1000 megajoules. Ordinary space-flight costs 1 megajoule a second, each burst from your laser cannon uses 10 megajoules of power, and it costs 50 megajoules every time your defensive screen saves you from disintegration at the hands of an onrushing starfighter.

The two types of enemy ships, transports and starfighters, pose vastly different problems. As the player steers his ship "up" or "down," transports enter from the left or right and cross the view-screen. Though the transports zip by at a variety of angles, all will eventually cross the screen horizontally if players keep steering in the same direction long enough. Shooting at a transport while it diagonally bisects the screen burns up megajoules at a furious rate—and the chance of scoring a hit is slender. Remember, a missed laser blast equals 10 full seconds of space cruising. Squandering three or four shots on each defenseless transport will leave the player short of power near the end of the game.

The starfighters, on the other hand, are far from defenseless. Equipped with warp drive, they materialize on the screen to a blaring buzzer and a flashing "alert" sign, and rush the player's ship from a bewildering variety of directions. The starfighters will close and fire unless the player takes suitable evasive action. (A starfighter can't destroy your ship outright, but the 50-megajoule cost every time defensive shields energize is penalty enough in a time-limit game like this.)

At the end of each game, when the enemy is destroyed or there's no more power, the computer flashes an appropriate message from Star Command. Losers are forced into retirement or called home for a court-martial, while successful star pilots get a pat on the back and, sometimes, a promotion to commodore.

The best strategy is to eliminate transports as the chance for an easy shot arises while hunting for starfighters, particularly easy-to-track ones heading right for your position. Don't be afraid to evade a starfighter that is approaching from an unhittable angle, since avoiding use of the defensive shield is the key to winning.

Wiping out the entire enemy fleet with 400 or more megajoules remaining in the energy supply is an excellent game. Pulling off the same trick while burning 300 or less power units is a feat worthy of Luke Skywalker himself. **V**